

FIG. 1

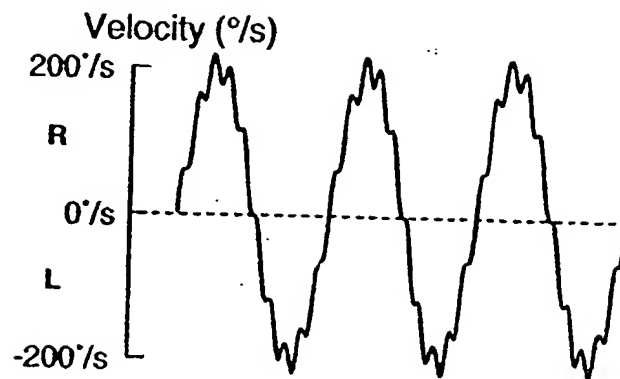


FIG. 2

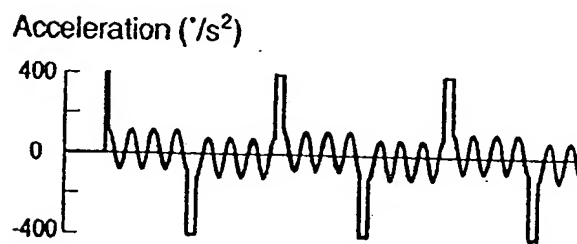


FIG. 3A

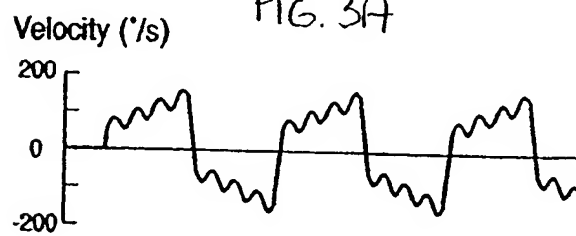


FIG. 3B

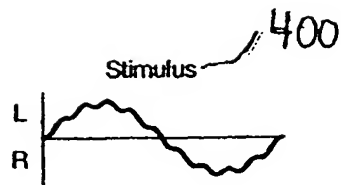


FIG. 4A

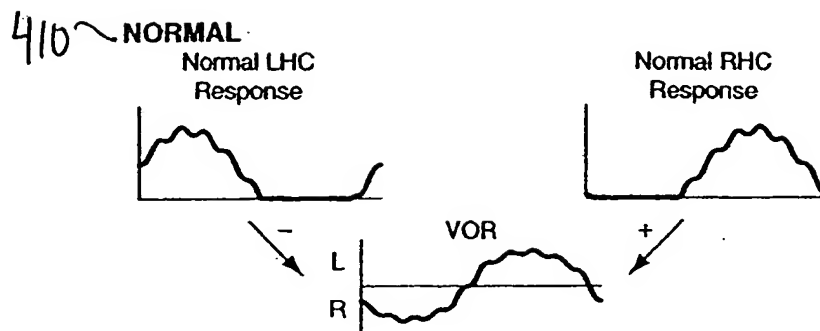


FIG. 4B

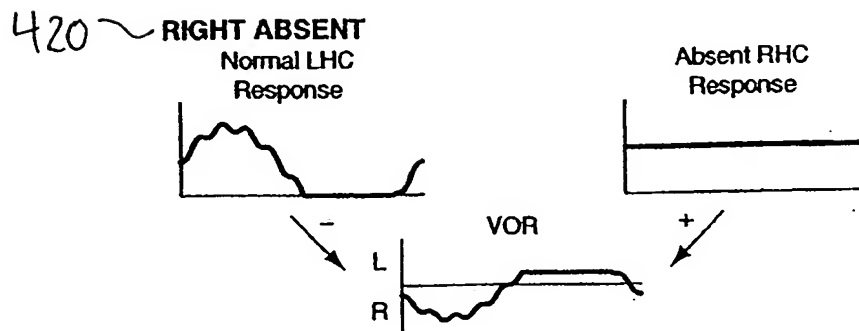


FIG. 4C

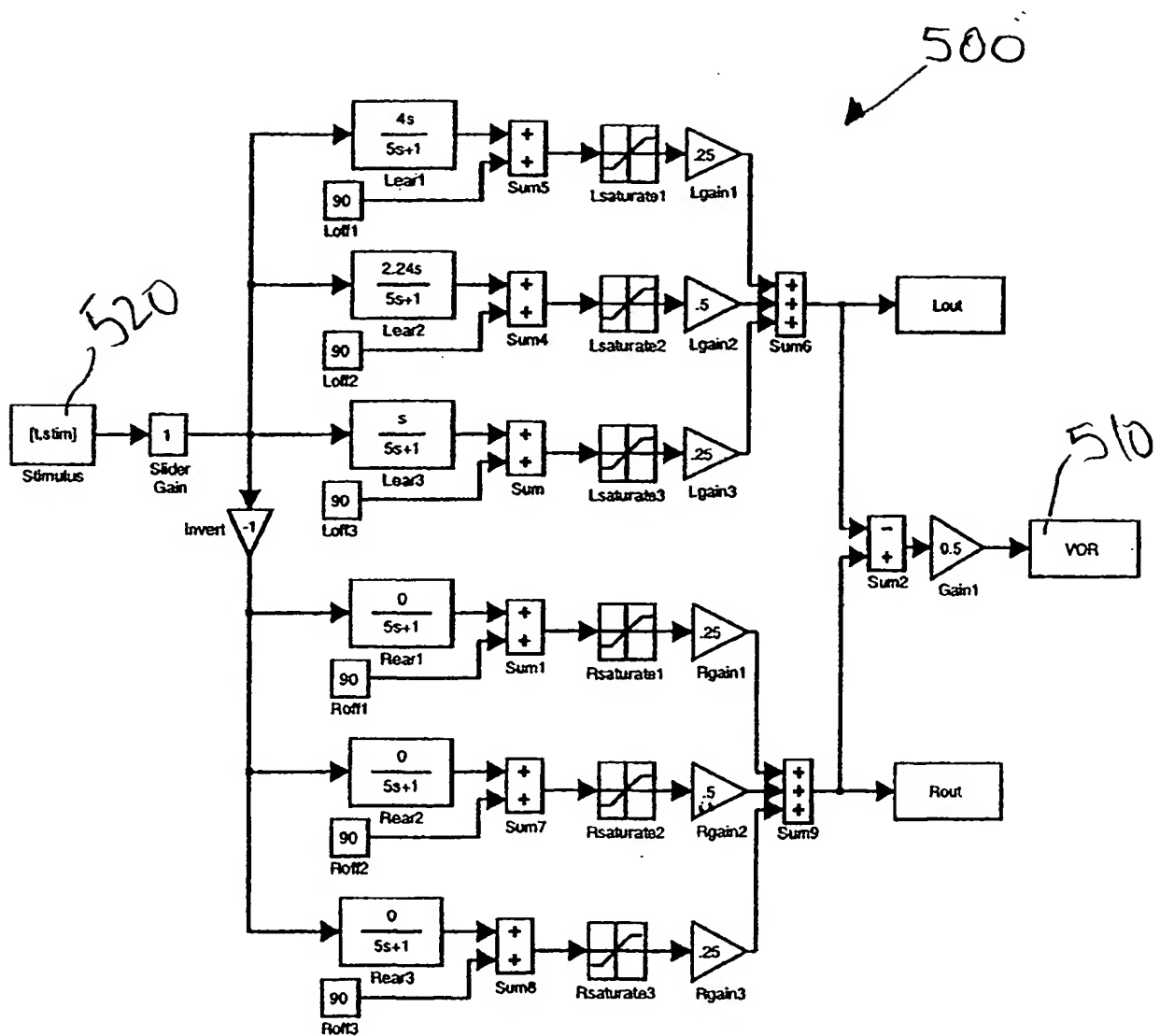
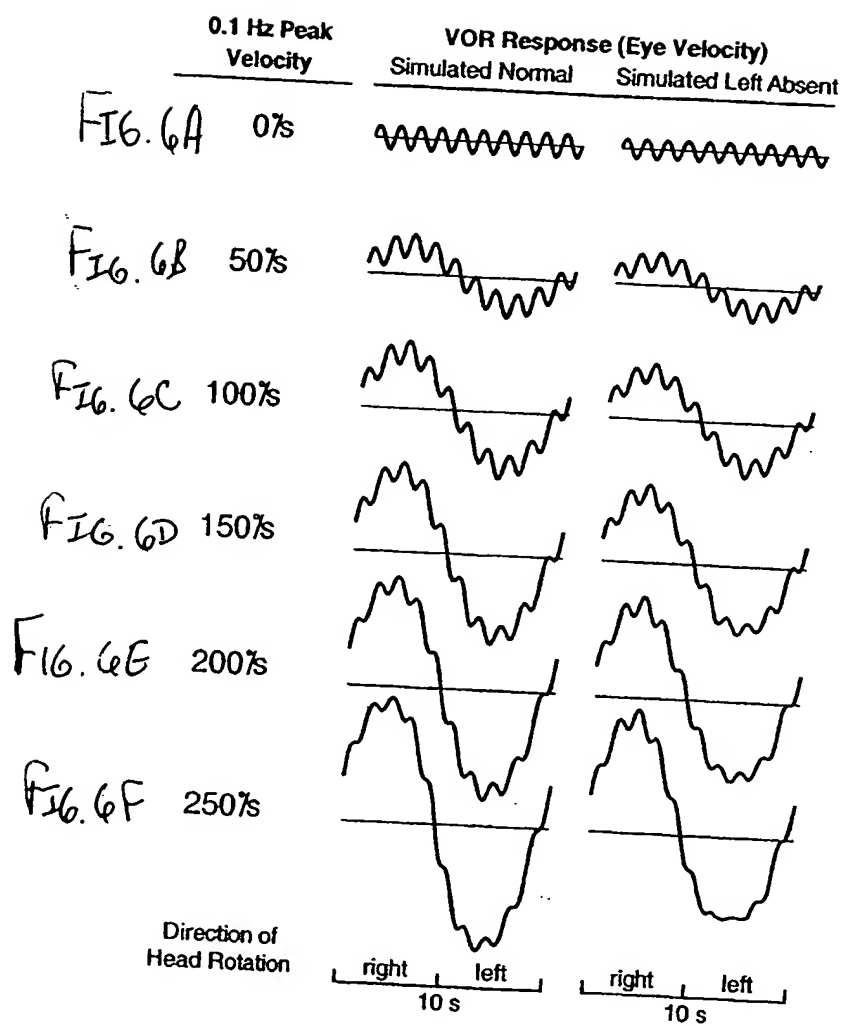
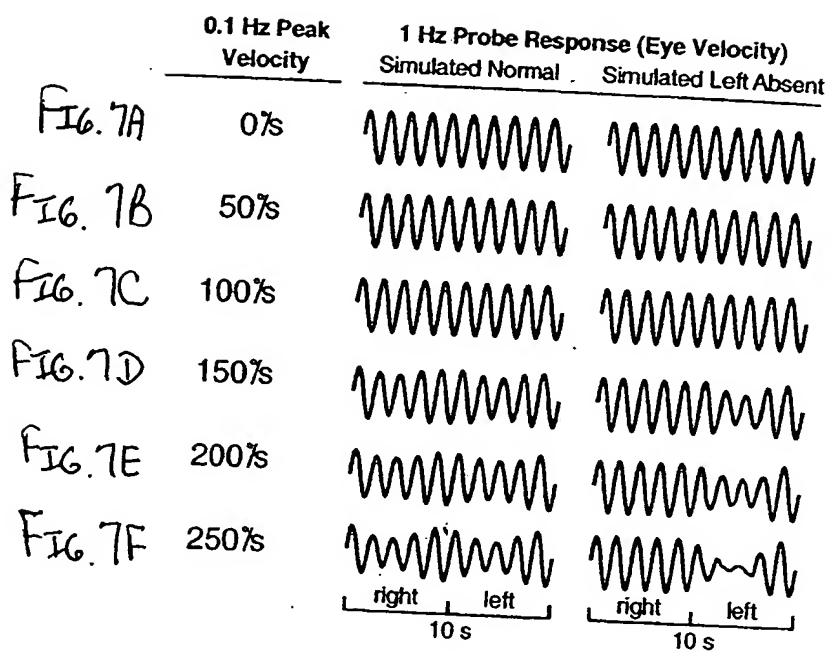
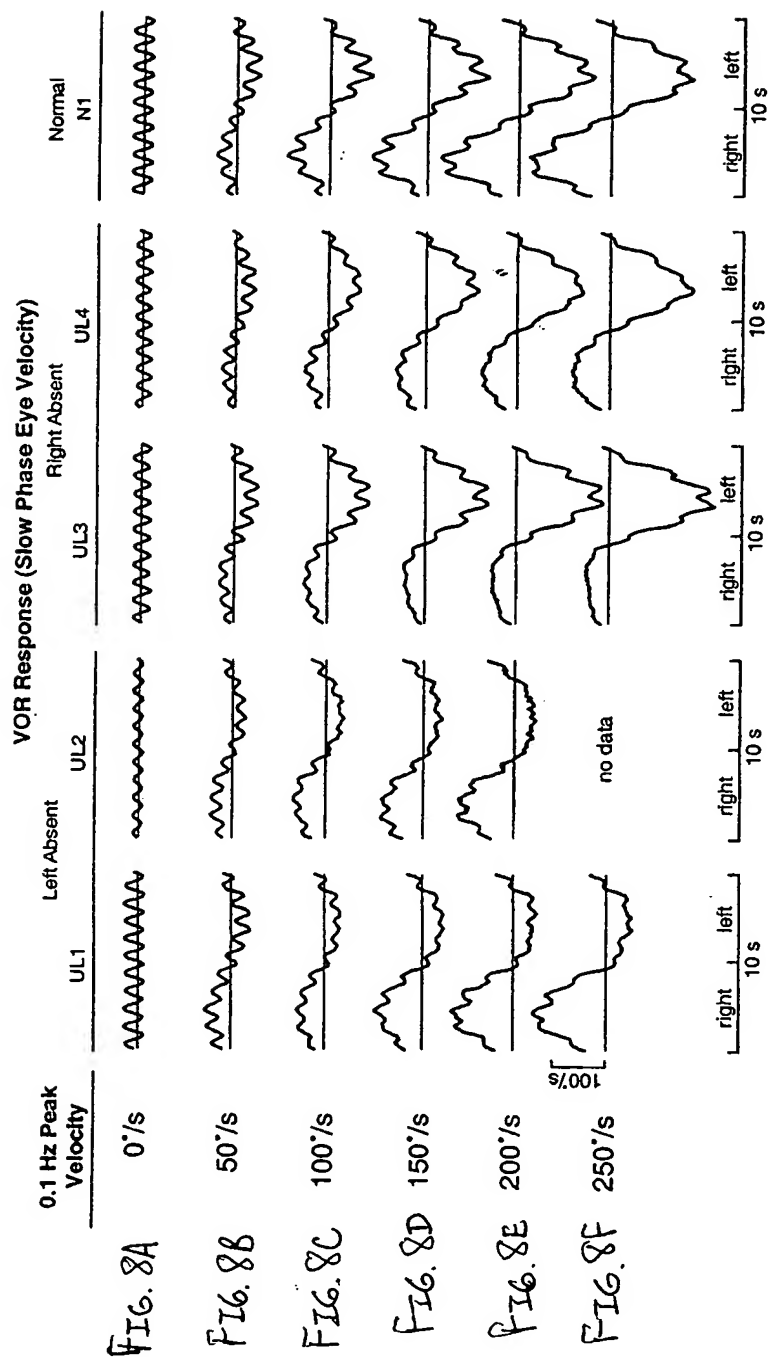
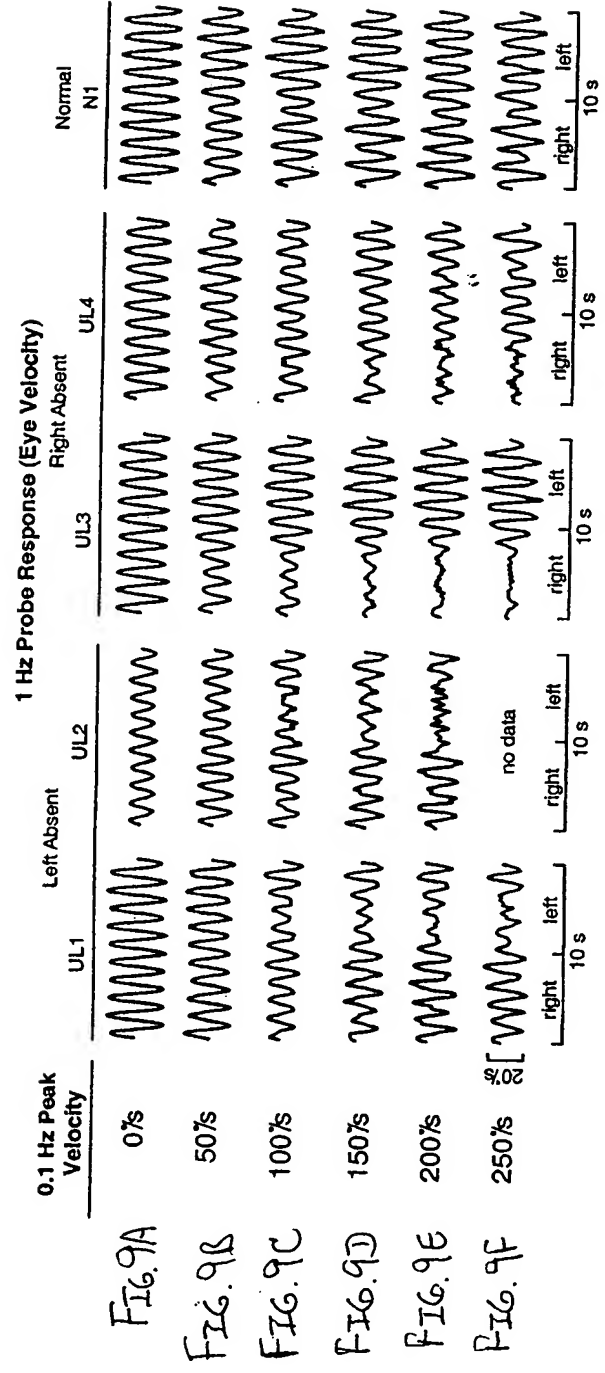


FIG. 5









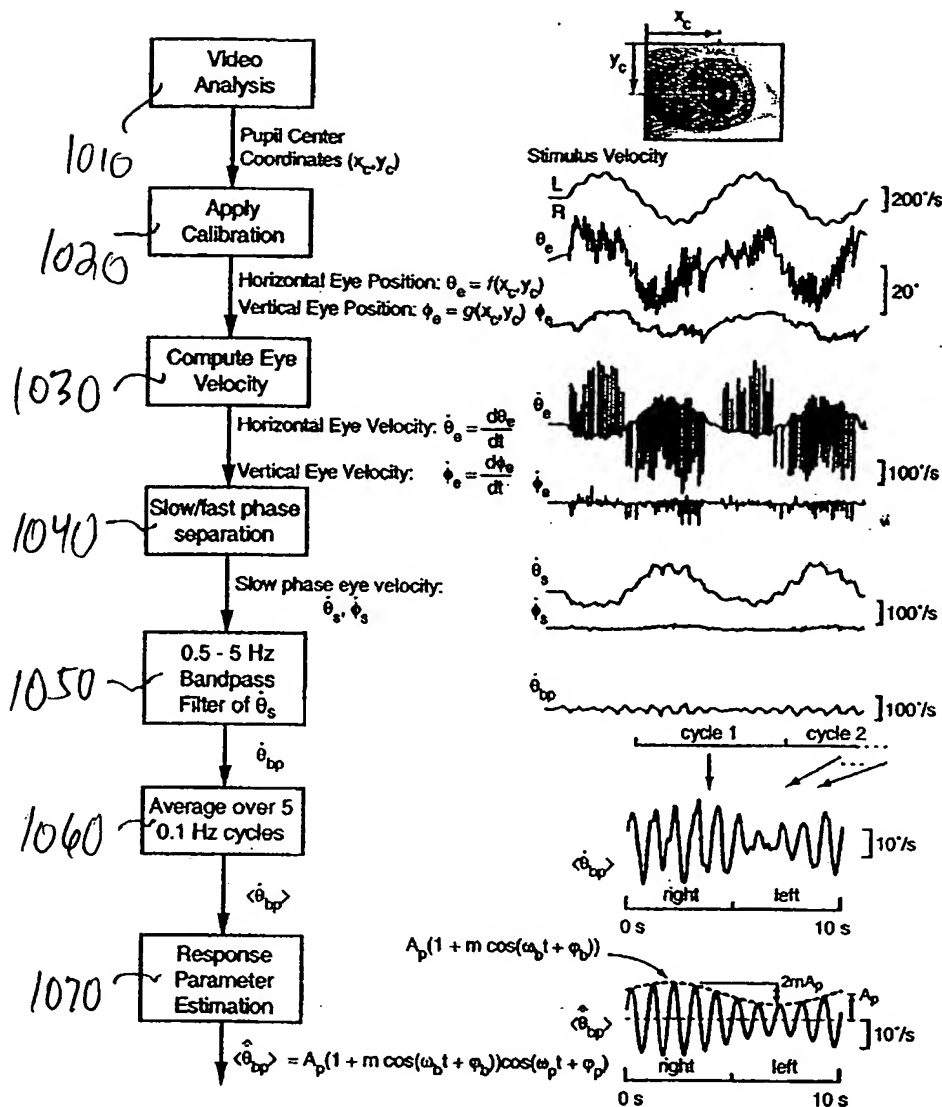


FIG. 10A

FIG. 10B

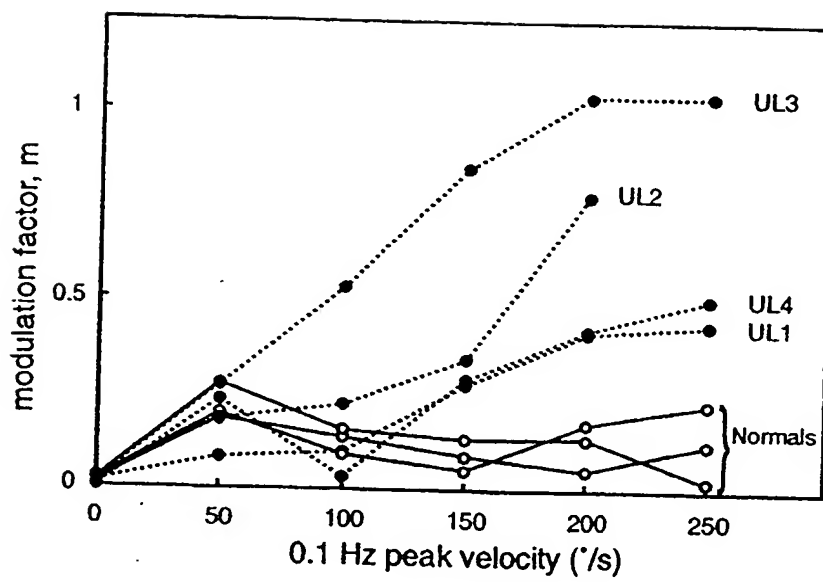


Fig. 11

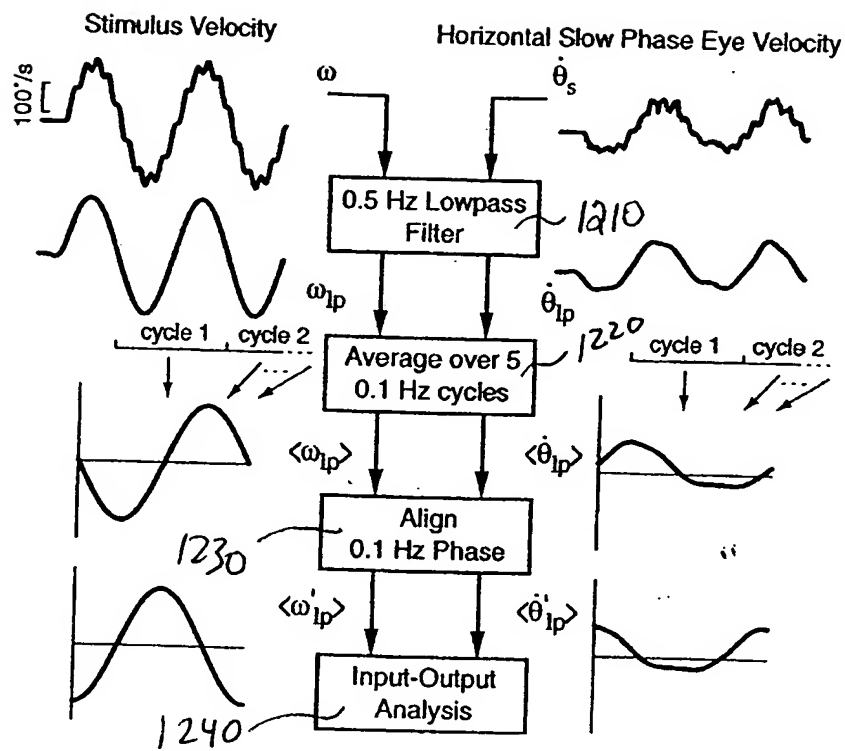


FIG. 12

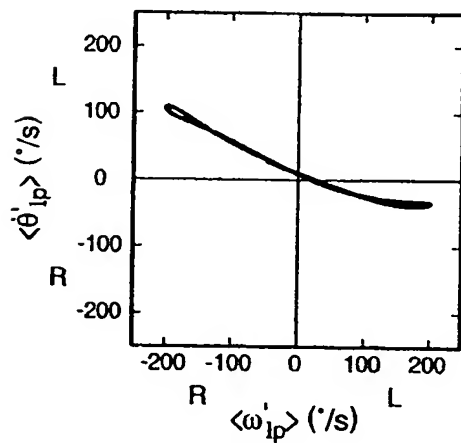


FIG. 13

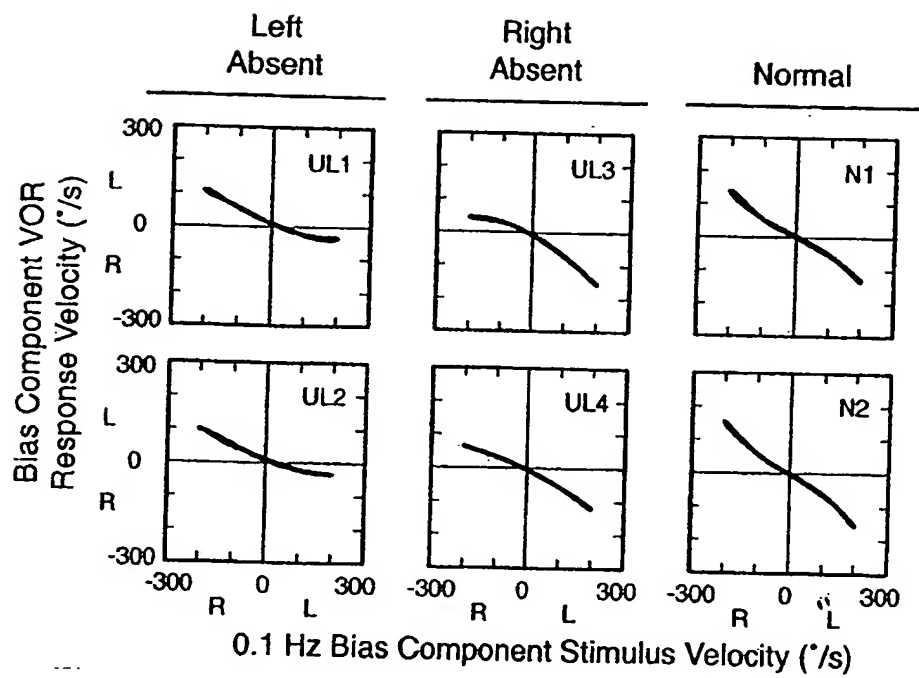
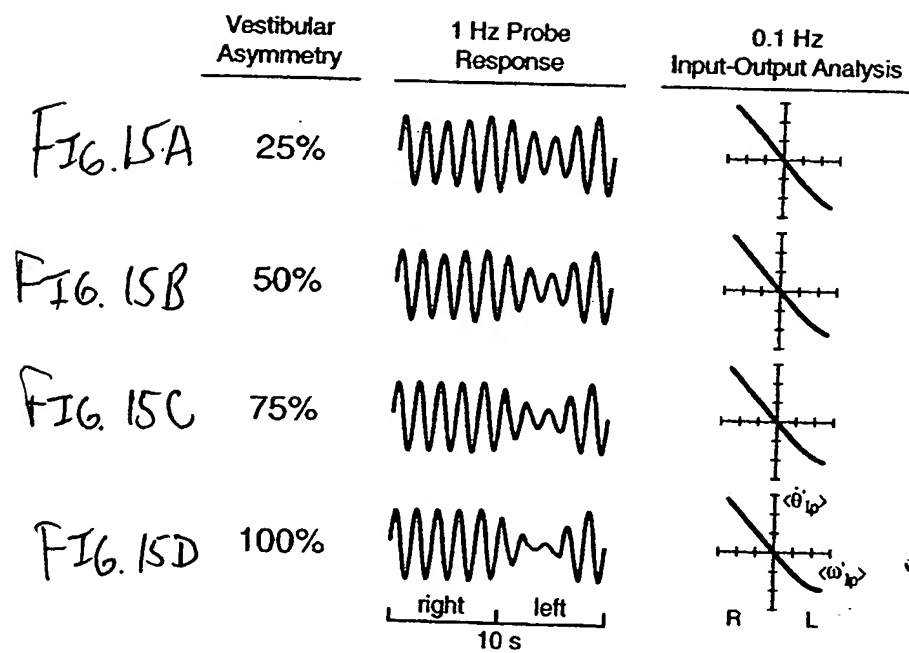


FIG. 14



Pulse-Step-Sine (PSS) Stimulus

FIG. 16A

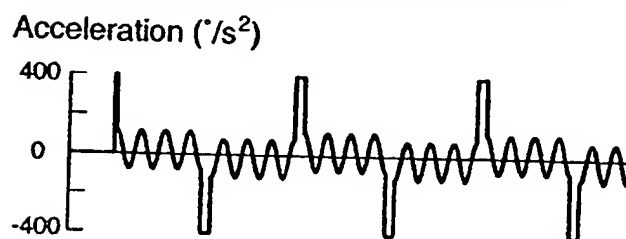


FIG. 16B

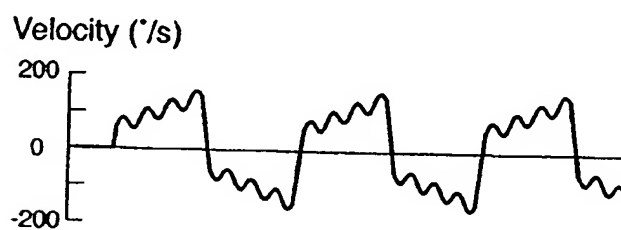
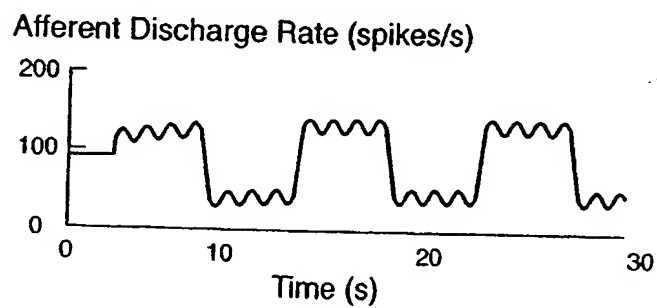
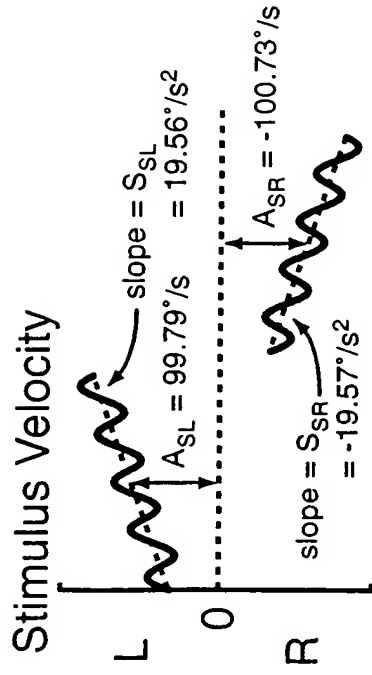


FIG. 16C



Step Component Measures



VOR Slow Phase Eye Velocity

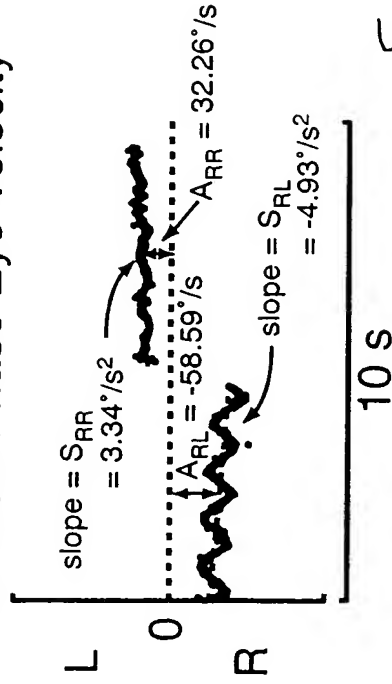


FIG. 17A

$$\text{Step Asymmetry} = \frac{\frac{A_{RL}}{A_{SL}} - \frac{A_{RR}}{A_{SR}}}{\frac{A_{RL}}{A_{SL}} + \frac{A_{RR}}{A_{SR}}} \times 100$$

(+) sign = decreased response to rightward rotation

(-) sign = decreased response to leftward rotation

$$\text{Mean Response Slope} = (S_{RR} - S_{RL})/2$$

Mean slope is related to the VOR time constant.

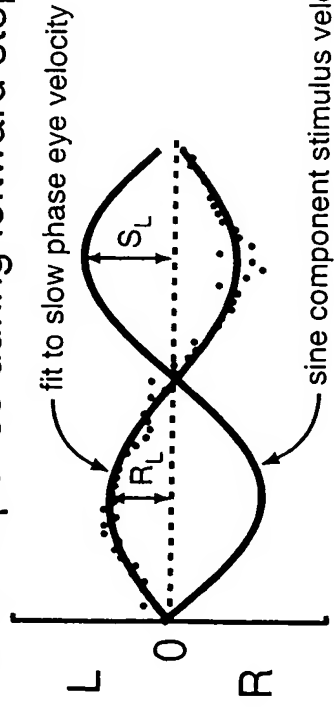
Slope > 0: time constant > 5s

Slope = 0: time constant = 5s

Slope < 0: time constant < 5s

Sine Component Measures

Sine response during leftward step



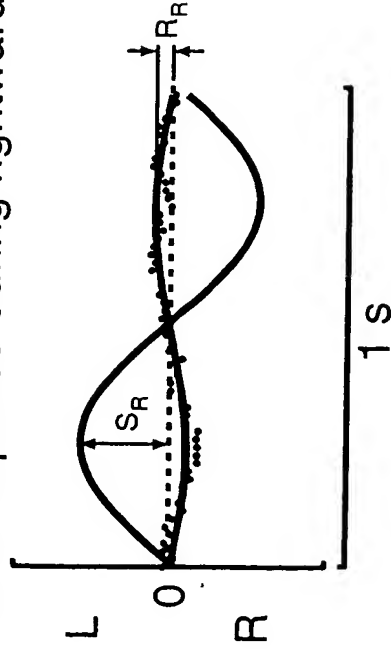
Sine component gain during leftward step

$$VOR_L = \frac{R_L}{S_L}$$

Sine component gain during rightward step

$$VOR_R = \frac{R_R}{S_R}$$

Sine response during rightward step



Sine component gain asymmetry

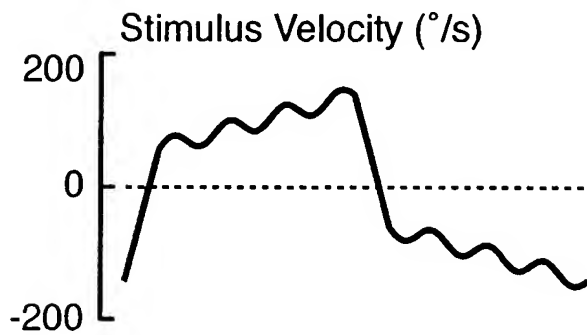
$$= \frac{VOR_L - VOR_R}{VOR_L + VOR_R} \times 100$$

(+) sign = decreased response to rightward rotation

(-) sign = decreased response to leftward rotation

FIG. 17B

VOR (in dark)



Normal "good" nystagmus



Normal "bad" nystagmus



FIG. 18A

VOR (with fixation)

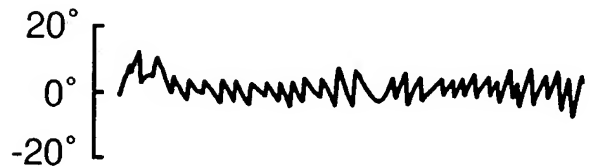
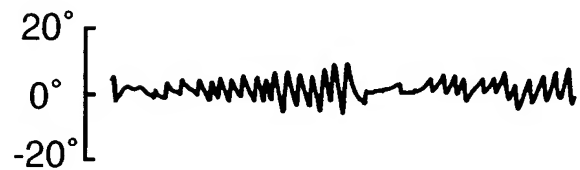
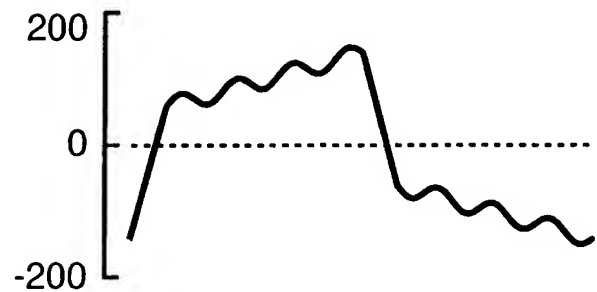
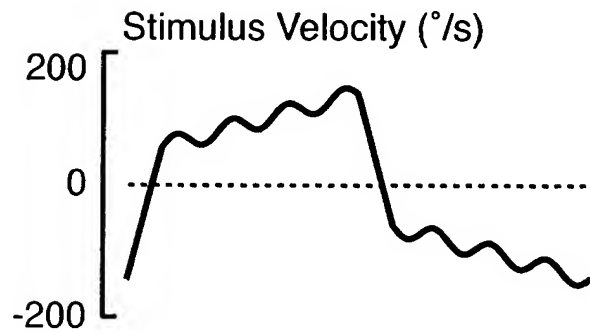
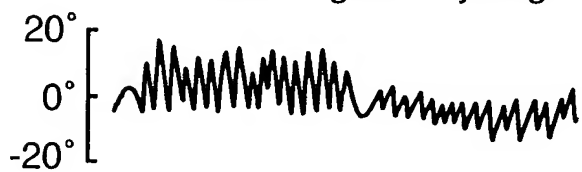


FIG. 18B

VOR (in dark)



R Unilateral "good" nystagmus



L Unilateral "bad" nystagmus



FIG. 19A

VOR (with fixation)

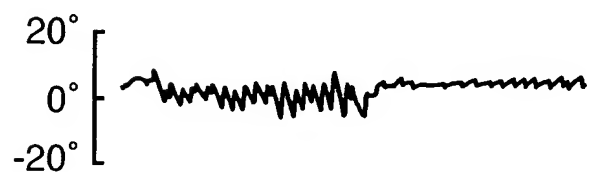
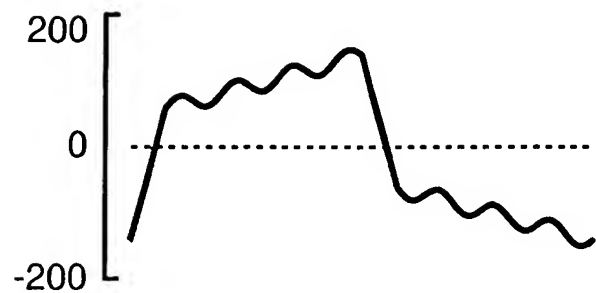


FIG. 19B

PSS Asymmetry (VOR with fixation)

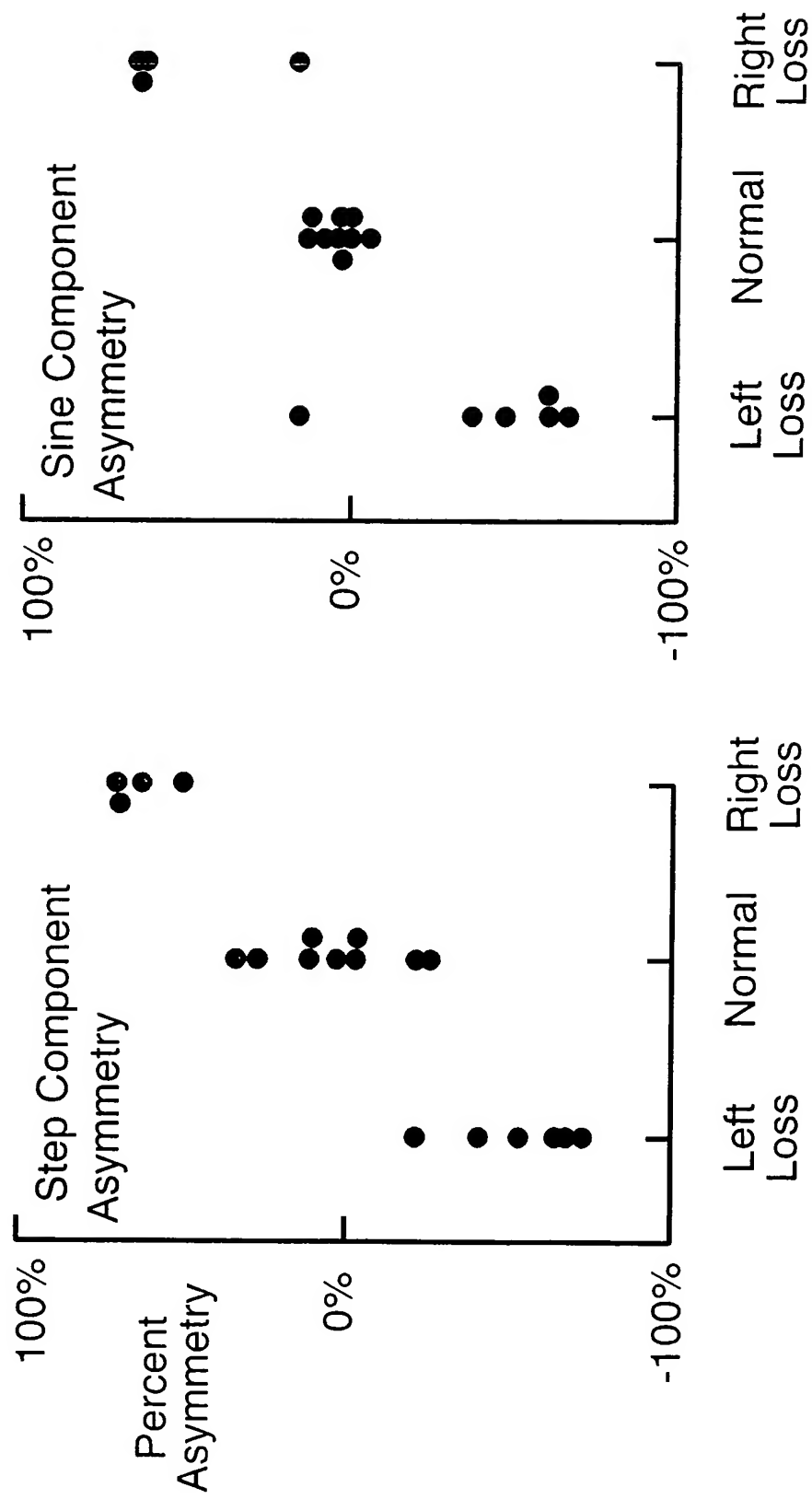


Fig. 30A

FIG. 20B